

1-(currently amended) A nucleus prosthesis for insertion in an ~~intervertebral~~ intervertebral cavity, the prosthesis characterized ~~by the fact in~~ that it comprises a first and a second interlocking structural component, each made of a semi-rigid, deformable elastic material suitable for supporting a compressive load; and in that, the second structural component inserts substantially within the confines of an envelop defined between surfaces of ~~into~~ the first structural component.

2-(currently amended) The nucleus prosthesis ~~(1)~~ according to claim 1 characterized ~~by the fact in~~ that:

- the first structural component ~~(12)~~ takes the form of a hollow sphere flattened at the poles and has a central cavity ~~(121)~~ accessible via a deformable opening ~~(122)~~ in the component, and an interface to which a rigid stem ~~(21)~~ can connect via a connection ~~(124)~~, and

- the second structural component ~~(11)~~ is substantially a full sphere ~~(111)~~, which is able to pass through the deformable opening ~~(122)~~ into engagement with the central cavity ~~(121)~~, in order to form an elastic block which cannot be expelled from its housing when the prosthesis is subjected to imposed mechanical forces.

3-(currently amended) The nucleus prosthesis (1) according ~~Device (3) for the installation of a prosthesis (1) according~~ to claims 1 and 2 characterized ~~by the fact in~~ that the device comprises

- insertion tubes ~~(23), (24), and (25)~~ which guide the first structural component ~~(12)~~ of the nucleus prosthesis ~~(1)~~ into the to-be-filled intervertebral cavity and, after insertion, hold the first structural member in place; and

- a rigid stem ~~(21)~~ connected to the first structural component ~~(12)~~ via the connection ~~(124)~~, the rigid stem guiding the second structural component ~~(11)~~ through the tubes ~~(23), (24), and (25)~~ into engagement with the central cavity ~~(121)~~ of the first structural component ~~(12)~~ after insertion into the intervertebral cavity.

4- (currently amended) A The nucleus prosthesis according to claim 1 ~~one of the preceding~~

~~claims~~ characterized ~~by the fact~~ in that the deformable opening (122) of the first structural component (12) cuts a sector through the thickness of the first structural component (12), the opening (122) having a constriction (123) that prevents expulsion of the second structural component (11) after the introduction of the second structural component (11).

5- CANCEL WITHOUT PREJUDICE.

6- (currently amended) A The nucleus prosthesis according to claim 4 characterized ~~by the fact~~ in that the second structural component (11) comprises a fixation (116) allowing the passage of a screw for fixing on the bone in order to better ensure good anchoring of the prosthesis (1).

7- (currently amended) A The nucleus prosthesis according to claim 3 characterized ~~by the fact~~ in that the

first structural member (12) comprises a thread (127f) for receiving the guidance stem (21) whose end has a corresponding thread, the aforementioned rigid stem (21) also allowing the withdrawal of the stem (21) by simple unscrewing, once the prosthesis (1) is in place.

8- (currently amended) A The nucleus prosthesis according to claim 7 characterized ~~by the fact~~ in that

the second structural component (11) has the shape of a champagne cork serving as a one way device comprising a deformable fully spherical head (111) and, optionally, as well as, if necessary, a slightly extending cylindrical body.

9- (currently amended) ~~The nucleus prosthesis Device (3) for the installation of a nucleus prosthesis~~ according to claim 8 characterized ~~by the fact~~ in that anchoring of the male part (11) in the female part is ensured by a oneway shoulder (128m) which overlaps the male parts (128m) and the female part (128f).

10- (currently amended) A The nucleus prosthesis according to claim 8 characterized ~~by the fact~~ in that a thickness of second structural component (11) slightly exceeds the thickness of the first structural component (12) in order to, during the dynamic stresses, initially compress the second structural component so as to better lock the second structural component into the central cavity.

11- (currently amended) A The nucleus prosthesis according to claim 1 ~~any preceding claims 1 to 8~~ characterized ~~by the fact~~ in that an insert in the first structural component makes it possible, by X ray inspection ~~visualization~~, to check the stability of the prosthesis over time.

12- (currently amended) The nucleus prosthesis of claim 11, wherein the means of visualization is a cylindrical metal insert which is clearly distinguishable from the first and second structural component by X ray inspection ~~visualization~~, the insert having a clear orientation when viewed by X ray, the orientation of the insert indicating the orientation of the prosthesis.

13- (new) A method for inserting an annular nucleus prosthesis into a nucleus cavity between two vertebrae, the method comprising the steps of:

(a) in a catheter tube having an insertion piston therein, inserting an annular nucleus prosthesis element into an insertion end of the catheter tube;

(b) placing the insertion end of the catheter tube into an opening in the nucleus annulus;

(c) activating the insertion piston to urge the annular nucleus prosthesis element into the nucleus cavity; and

(d) removing the catheter tube and insertion piston,

wherein, prior to the insertion of the annular nucleus prosthesis element into the insertion end of the catheter tube, a second nucleus prosthesis element is inserted into the insertion end of the catheter tube, this second element being smaller than the first element and being adapted to conform to an internal diametral surface of the first element when in a relaxed state..

14- (new) The method of claim 13, wherein, the first nucleus prosthesis element is threadingly attached to a guide rod adapted to move axially inside the insertion piston, in order that the first element may be stopped at a predetermined point within the nucleus cavity, and thereafter relative motion imparted to the second element so as to insert the second element within the first element inside the nucleus cavity.